

Amendments to the Specification

Please replace the paragraph beginning on pg. 2, line 27, with the following rewritten paragraph:

It is then desirable to provide a means for backside viewing of the wafer for optical scanning of photoemission-generating defects. A benefit would arise ~~is-if~~ such can be accomplished on existing frontside viewing and frontside probing automated probe stations.. The desired backside viewing should be accomplished by inverting the wafer instead of inverting the microscope, because inverting the microscope would further require ~~a-completing~~ re-engineering of the existing frontside viewing automated probe stations to allow for an unobstructed view of the backside surface of the wafer.

Please replace the paragraph beginning on pg. 6, line 19, with the following rewritten paragraph:

Turning to the drawings, exemplary embodiments of a method for testing integrated circuits on a wafer are shown. Fig. 1a is a partial cross-sectional view of an integrated circuit test apparatus 10 for frontside viewing while conducting automated frontside probing of a wafer, which includes holder 60 mounted to three-dimensional translational mechanism 70. Holder 60 is designed to receive and retain a backside bottom surface of a wafer ~~64-25~~ to be tested by typically applying vacuum pressure from the upper surface of holder 60 to the backside bottom surface of wafer 25. Probe station housing 80 provides base support to integrated circuit test apparatus 10. Platen 50 is suspended above holder 60 and has a generally circular opening 55, which allows probe needles 40 and optical scanning mechanism 20 to have access to the fronside of the wafer to be tested.

Please replace the paragraph beginning on pg. 8, line 9, with the following rewritten paragraph:

Once calibrated, the dimensions of each die are entered into the motor connected to mechanism 70. Thereafter, holder 70 is moved in the y direction to register probe needles 40 directly above the corresponding bonding pads of the integrated circuit on wafer 25. This is generally done when the wafer is in the home position. Thereafter, automated ~~probe-probing~~ can take place, beginning at the home position and incrementing the pre-measured distance across the wafer to the next integrated circuit, moving mechanism 70 in the y direction, making contact between the bonding pads and the probe needles, forwarding the stimulus current and voltage to the probe needles, and measuring the resulting values from the probe needles. This is repeated automatically between each integrated circuit across the entire wafer, with defective integrated circuits being noted. The defective integrated circuits will be noted as those which will not be packaged for shipment to a customer.

Please replace the paragraph beginning on pg. 11, line 2, with the following rewritten paragraph:

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Optical scanning mechanism 220 is adapted for photoemissions microscopy, wherein it may include, inter alia, magnifying and focusing lens, a electromagnetic radiation source, and a microscope, where the microscope may be a charged coupled device (CCD). Optical scanning mechanism 220 is positioned over the ~~waver~~wafer so as to being viewing the backside surface of the die that is undergoing testing. The die may be electrically test probed with probe needles 240 in contact with the frontside die I/O contacts to provide ground and power to the integrated circuit to ready standby condition, and/or activated the circuits. Concurrently, during said electrical test probing, optical scanning mechanism 220 is optically scanning the backside surface with a beam of electromagnetic radiation in order to detect photoemission-generated defects, which may occur for shorts, juncture leakages, pinhole defects in the oxide layers, latch-up, hot-carrier gate generation, etc. The scanning beam may be a beam of infrared electromagnetic radiation, since lightly doped silicon as seen from the backside surface of the dice on the wafer is readily transparent to this particular wavelength of electromagnetic radiation.